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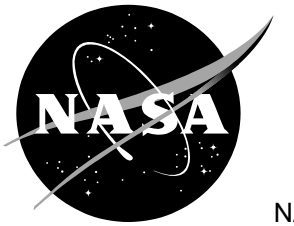
Space Shuttle Program
and
International Space Station Program

SUPPORT REQUIREMENTS SYSTEM MANAGEMENT PLAN

December 1997



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Space Shuttle Program
and
International Space Station Program

SUPPORT REQUIREMENTS SYSTEM MANAGEMENT PLAN

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PREFACE

The Space Shuttle Program and the International Space Station Program (SSP/ISSP) Support Requirements System (SRS) Management Plan serves as the replacement for NASA Management Instruction (NMI) 8610.10B: "Management of Operational Support Requirements for Manned Flight Missions" dated December 19,1991. This plan amplifies the provisions of the NMI and provides a level of detail not suitable for an NMI. It was developed as a joint effort of the SSP/ISSP Program Requirements Managers (PRM), Database Managers (DBM), Requirements and Response Managers (R&R), the KSC Automated Support Requirements System Manager (ASRS), the Space Operations Management Office's (SOMO) Center Mission Service Managers (CMSM) and NASA Integrated Services Network (NISN), the JSC Chief Information Office (CIO), the Department of Defense (DoD) representatives, and the KSC NASA-Air Force Management and Aircraft Operations Office representative (FF-R).

The provisions of this management plan take precedence over other documents that may describe functions and areas of responsibility of the SSP/ISSP SRS personnel. Applicable documents that describe SRS processes and procedures in more detail include: The ASRS Handbook KSC-HB-GP60-2, Universal Documentation System Handbook 501-84, and NMI 8610.11 (current revision) Control of Access to Operational Voice Communications Circuits.

Questions and comments on this document, the NMI 8610.10B, and other related documentation may be directed to Joseph M. Aquino/NASA JSC/DB at (281) 483-4033 or e-mail (jaquino@ems.jsc.nasa.gov). Change requests for this document will be coordinated and approved by the Program Requirements Managers and the SRS Manager, and revisions will be published as needed.

Space Shuttle/International Space Station
SUPPORT REQUIREMENTS SYSTEM
MANAGEMENT PLAN

1. PURPOSE

This management plan defines operational and working interfaces among Space Shuttle Program (SSP) and International Space Station Program (ISSP) personnel and support organizations involved in the SSP/ISSP Support Requirements System (SRS). The plan identifies interfaces among various personnel and organizations using the Automated Support Requirements System (ASRS) for the Program Requirements Documents (PRDs) and associated Program Support Plans (PSPs), and Operations Requirements document (OR) and associated Operations Directives (ODs).

2. AUTHORITY

This plan has been developed in accordance to the direction from the Associate Administrator for Space Flight (memorandum M-7, NMI 8610.10B, Management of Operational Support Requirements for Office of Space Flight Programs, dated April 8, 1997) and follows the provisions of NMI 8610.10B "Management of Operational Support Requirements for Manned Flight Missions," dated December 19,1991. This document supersedes the rescinded NMI 8610.10B.

3. APPLICABILITY

This management plan applies to Program Office organizations and NASA Field Installations involved in the SSP and ISSP, Department of Defense installations in accordance with the "NASA/DoD Memorandum of Understanding on Management and Operation of the Space Transportation System," of March 27,1980, and its sub agreements. The International Partners and Participants (IP's) are governed by this document only to the extent specified in their respective Memoranda of Understanding (MOU) with NASA.

4. SCOPE

This document describes interfaces among the SSP/ISSP Program Requirements Managers (PRM), the SRS Manager, Database Managers (DBMs), Requirements and Response (R&R) Managers, the ASRS Manager, the Space Operations Management Office's (SOMO) Center Mission Service Managers (CMSM) and NASA Integrated Services Network (NISN), and other NASA and DoD representatives involved with the operational support requirements (see Appendix A) for all human space flight missions. The management plan is primarily intended as a guide for these interfaces and provides a working description of the structure of SRS documents and their interrelationships.

5. BACKGROUND

5.1 History of the Support Requirements System

The formal documentation system for requesting launch and flight support for NASA space programs has evolved over the years. The initial support documentation for human space flight programs (Mercury and Gemini) followed guidelines established by the DoD. For the Apollo, Skylab, and ASTP programs, a Manned Space Flight Support Requirements Documentation (MSFSRD) system was developed by NASA using DoD guidelines. The complexity of NASA's programs, an increase in the number of interrange programs, and the fact that many users were dealing with more than one range, suggested the need for a common support documentation system. In January l966, the DoD Range Commanders Council (RCC) chartered the Inter-Range Documentation Group (IRDG) in order to establish a standardized system to be used at DoD National Ranges for documenting user programs, test support requirements, and range support capabilities and commitments. NASA was invited as an associate member of the IRDG since, as a major user, NASA would use the resulting documentation system. NASA was also interested in standardizing documentation within its own organizations, so it provided substantial assistance to the IRDG in developing a common documentation system. The resulting system, Universal Documentation System (UDS), was approved by the Range Commanders Council in November 1967. The UDS has been used for expendable launch vehicle range support since early development. Human space flight programs used MSFSRD system until NASA agreed to use the DoD UDS at the start of the Space Shuttle Program.

5.2 Universal Documentation System

The UDS is used to formalize arrangements between organizations and agencies that require support of space programs and installations that provide such support. Since its inception, the UDS has been expanded and revised to accommodate the needs of other test and operational programs. The UDS consists of three levels of documentation:

A. UDS level I Documents

1. Program Introduction Document (PID): The PID is the initial planning document submitted by an organization or agency to identify the scope and duration of a program activity and types of support required. This document is prepared and approved by the agency's Lead Center office prior to formal transmittal to the support organizations/agencies. It is used as a control document and is updated as required to reflect changes in program scope and responsibilities or support requirements.

2. Statement of Capability Document (SCD), The SCD is the support agency's response to the PID. This document is evidence that a program has been accepted for support by the support organization and/or agency, and defines the installation's capabilities for supporting the requirements stated in the PID. The support conditions, qualifications, and resources are identified in this document and serve as a baseline

reference to subsequent commitment by support installations. The PID and the SCD complement each other in establishing the scope of the program support activity.

B. UDS Level 2 Documents

1. Program Requirements Document (PRD), The PRD is prepared by an organization to describe the detailed technical and administrative operating requirements for support desired from support organizations. The PRD will document specific support requirements and not procedures or implementation actions. Separate sets of PRDs will be developed and maintained for the SSP and the ISSP.

2. Program Support Plan (PSP): The PSPs are response and commitment documents to operational support requirements presented in the PRDs. These documents are provided by support organizations for all sets of PRDs, and commit resource, identify items that cannot be supported, or request additional information, justification, funding coordination, etc.

C. UDS Level 3 Document:

1. Operations Requirements (OR): The OR is a mission oriented document prepared by requesting organizations as required to further refine support requirements for each mission, test, activity, etc. It contains requirements which are substantiated by the official PRDs and provides the support installations with specific requirements for issuing the ORs and PSPs. For both, SSP and ISSP, a single OR will be developed and maintained for each mission.

2. Operations- Directive (OD): The OD is the support response to an OR and provides the commitment for support by the organization or agency. It is a detailed plan for implementation of the support functions for a program, mission, specific test, or series of tests.

5.3 Range Commanders Council and UDS Management

The DoD Range Commanders Council Documentation Group (RCC DG) has total responsibility for UDS management, and is comprised of representatives from DoD member ranges and an associate member from the Kennedy Space Center (KSC) NASA-Air Force Management and Aircraft Operations Office (FF-R). The RCC DG developed the UDS Handbook (RCC Document 501) which is published by the RCC. This handbook consists of three volumes describing the UDS, provides guidelines for use and control of the UDS, and includes sample formats and procedures for document preparation. It includes guidelines for the development of documentation systems required by subscriber agencies, to meet specific program documentation needs. KSC/FF-R is the NASA point of contact on all matters relating to the UDS and RCC DG,

The ASRS was developed in coordination with the RCC DG and in accordance with the UDS Handbook 501-79, Volumes 1, 2, and 3, and UDS Handbook Supplement 2,

"Procedures for the Electronic Transmission and Processing of Level 1, 2, and 3 Test Requirements and Support Information (RCC Document 501-84)." RCC Document 501-84 was superseded by RCC Document 501-97 in March 1997; however, NASA agreements with the Eastern Range (ER) allow continued use of RCC Document 501-84.

5.4 Automated Support Requirements System (ASRS)

The requirements system was operated manually for many years. In 1981, at the start of the Space Shuttle Program, it was decided that the system could be made more efficient and faster by automating the process utilizing a mainframe computer. The ASRS was developed by KSC to enhance efficiency and timeliness of the NASA SRS and provide electronic transmission of operational support requirements and responses. The ASRS software displays a derivative of the UDS formats and provides a combination of UDS documents. Also, production of a separate PSP was eliminated by including the PSP commitment to support as a part of each requirement entry. All requirements and responses entered into ASRS databases are available immediately, via electronic terminal access, to the organizations and agencies requesting or providing support.

The ASRS was implemented as an operational system in 1983, after a two-year planning and implementation period, to support Space Shuttle flights beginning that year. This system was implemented as part of the KSC Support Planning and Data Management System I (SPDMS I) on a Honeywell computer as the automated version of the UDS Supplement 2. As this system grew in physical size, a new host computer (IBM 3090) for SPDMS II was selected, and ASRS was migrated to the new system in early 1991. A clear distinction should be made between the SSP/ISSP SRS and ASRS. The NASA SRS is for documenting and managing requirements and responses negotiated among SSP, ISSP, and other organizations. It is operated by organizations that support Space Shuttle and the International Space Station operations and managed by Code M. The ASRS is one of several applications within a large mainframe computer complex managed and operated by KSC in support of Code M programs. The SRS community will jointly strive to coordinate and integrate various agency data bases with ASRS, where effective, and will continue to seek lower cost, more accessible alternatives to the current ASRS mainframe implementation.

6. DATABASE DESCRIPTION

The SRS databases are separated according to program, mission phase, and center management responsibilities; however, there is some overlap of requirements among the databases. The databases are maintained and logically separated in ASRS where UDS Level 2 and Level 3 documents can be accessed as needed. Currently, use of the Level 3 documents (ORs/ODs) is at KSC and certain DoD facilities for support of pre-launch testing and specific launch and mission operations.

6.1 SSP Launch and Landing Databases

The SSP Launch and Landing databases are managed by the Kennedy Space Center (KSC). These databases contain requirements levied on an organization, center, or agency providing support to the SSP, and requirements levied on the Space Shuttle and other resources for support to the payloads during the time prior to launch, during launch, landing, and post landing. This includes operational support requirements on NASA and DoD during pre-launch testing of both the Orbiter and any payload using Space Shuttle systems.

a. Volume I: Space Shuttle
b. Volume II: Payloads, with payload annexes
c. Volume III: International Space Station, with annexes

6.2 SSP Flight Databases

The SSP flight databases are managed by the Johnson Space Center (JSC). These databases contain support requirements levied on an organization, center, agency, or DoD for support to the SSP, and the requirements placed on SSP resources for support to all payloads during the time the Orbiter is in orbit (i.e., during the launch sequence until crew egress post landing).

a. Volume I: Space Shuttle
b. Volume II: Payloads, with payload annexes
c. Volume III: International Space Station, with annexes

6.3 ISSP Orbital Databases

The ISSP orbital database for the Space Station core systems is managed by JSC, and the ISSP orbital database for Space Station payloads is managed by the Marshall Space Flight Center (MSFC). These databases contain ISSP operational support requirements levied on an organization, agency, or DoD for support to the ISSP during the assembly and operational phases.

a. Volume I: ISS Core systems
b. Volume II: ISS Payloads, with payload annexes

7. ROLES AND RESPONSIBILITIES

7.1 Program Requirements Management

Program Requirements Manager (PRM): Because the SSP and ISSP are managed by different organizations, a PRM shall be assigned by each Program to act as the point of contact for operational support requirements for their respective Programs. These individuals are directly responsible for the approval and funding of requirements, and coordinate with the SRS manager to ensure the SRS is meeting the needs of the Programs. The PRM is the Program's interface with SOMO, and will develop and manage Program internal budgeting and approval processes. The PRM will provide management coordination for the review and approval of SSP and ISSP operational support requirements documents.

7.2 SRS Management

SRS Manager: The SRS manager will develop policies regarding management of existing requirements documents, will coordinate with the SSP/ISSP PRMs to ensure appropriate funding to permit a viable SRS, and will resolve issues raised from SSP and ISSP organizations regarding implementation of this management plan at the NASA centers and the DOD installations.

The SRS Manager is directly responsible for ensuring that the SRS operates within the provisions of this management plan, the SSP/ISSP SRS management team is properly staffed and responsive to the SRS community, and the support requirements of the International Partners and Participants are properly addressed. This individual shall ensure proper coordination to resolve issues among DBMs and R&R Managers. The SRS manager will ensure that interests of the Program users of the SRS PRD/PSP are well served, documents are properly designed for their use, and the KSC ASRS provides adequate support as the SSP/ISSP host.

This document also serves as a delegation of authority as both the SSP and ISSP delegate the SRS management function to the JSC Mission Operations Directorate.

7.3 Requirements Management

Database Managers (DBMs): DBMs are assigned to each database, and have the primary responsibility for ensuring the overall quality of databases and for the format and consistency of data entries. They are responsible to users of databases for ensuring good flow, readability, timely updates, consistency, and appropriate reviews documents to purge and correct old entries. The DBMs may function as the R&R Managers and may have dual responsibility for SSP and ISSP PRD/PSP databases.

Requirements and Response (R&R) Managers: R&R Managers are responsible for the quality and accuracy of the support requirements and support responses contained in the SRS databases. These individuals are directly responsible for developing, verifying,

obtaining official approval, and submitting requirements against other centers or agencies, evaluating impact of requirements submitted against their individual organizations, and developing and validating appropriate responses. The R&R Managers are also responsible for the accuracy of the technical statements, status of funding, periodic review of existing requirements and responses for continued applicability, and responding to all the questions regarding their requirements and responses. The R&R Managers who are responsible for documenting the requirements must ensure support requirements are funded, within the scope of their MOUs, and in accordance with applicable cost recovery policies.

7.4 ASRS Management

ASRS Manager: The ASRS Manager, located at KSC, has overall management responsibility for operation, maintenance, and enhancement of ASRS. This individual manages the KSC host computer interfaces for users of the SSP/ISSP SRS and assures continuous proper operation of the ASRS computer system. The ASRS Manager shall ensure system connectivity and compatibility, assign passwords and user IDs, and assure functions of the system provide all users the capability to process operational support requirements. Use of the system and a full description of duties are found in the ASRS Handbook (KSC-HB-GP60-2) which is published and controlled by KSC.

7.5 NASA-DoD Interface

KSC NASA-Air Force Management and Aircraft Operations Office (FF-R): KSC is the lead NASA center for coordinating the DoD 45th Space Wing (45 SW) Lead Range Support. FF-R serves as NASA's point of contact with the 45 SW for overall range support, planning, scheduling, support capabilities and facilities, and resource usage including the reimbursements for such support. The ER Lead Range Network Support shall be coordinated with KSC and the Goddard Space Flight Center (GSFC) as the lead center for NASA's communications, tracking, and data acquisition. In both cases, responses from the 45 SW will be through FF-R.

The FF-R NASA-DoD Support Manager is the point of contact for the SRS management coordination of all requirements and response matters between NASA and the ER Lead Range. This individual also serves as NASA associate member to the RCC DG and is responsible for providing interface with the DoD RCC for all matters relating to the UDS.

8. FUNCTIONAL OPERATIONS AND INTERFACES,

Figures 1, 2, and 3 depict the technical coordination, requirements flow, SOMO insight, and funding coordination flow of the SSP/ISSP SRS. Figure 4 shows a more generic interpretation of the SRS process.

8.1 Program Requirements Manager

The PRMs for each Program will define internal approval and funding processes that best suit their respective Programs, and will coordinate with SOMO, DBMs and R&R Managers on approval and funding of operational support requirements. These processes may include direct interaction with the DBMs, R&R managers, or as part of existing approval boards such as the Payload Integration Plan (PIP) and the Network and Communications Analysis and Integration Team (NACAIT). The PRM may delegate approval authority to DBMs or R&R managers if funding is not an issue.

8.2 SRS Manager

The SRS Manager will oversee and assure the integrity of SRS operations, specifically that it operates in the best interest of the Programs and the Agency. This oversight includes monitoring of SRS processes as well as those associated with ASRS, excluding ASRS management. The service that ASRS provides to the SRS will be reviewed by the SRS Manager and members of the SSP/ISSP SRS Management Committee. Recommendations for changes to the SSP/ISSP SRS will be made and implemented as appropriate. Recommendations for changes to services provided by ASRS will be placed as actions to the ASRS Systems Manager at either the annual KSC ASRS Management Committee meeting or monthly ASRS teleconferences.

8.3 SSP/ISSP SRS Management Committee.

A committee shall be established by the SSP/ISSP PRMs and the SRS Manager to include the DBMS, R&R Managers, ASRS system Manager, NISN representatives, the KSC FF-R NASA-DoD Support Manager, and DoD representatives to discuss and resolve issues rising within the SRS community. Committee meetings shall be co-chaired by the PRMs and SRS Manager, and minutes will be issued to document SRS topics, issues, resolutions, and recommendations. The committee will also discuss long range strategies and schedules for the SRS, ASRS enhancements, and operational problems. Action items regarding the ASRS enhancements, problems, issues or concerns will be formally presented to the KSC ASRS management forums for technical review and impact assessments.

8.4 Database Managers

The DBMs have overall responsibility of the PRDs/PSPs regarding all requirements inputs and responses to ensure continuity and accuracy of the databases and preserve the integrity of the database as a whole. The DBM may challenge any requirement or response provided by the R&R Manager, and, in some cases, reject requirements deemed inappropriate for a particular database. The DBMs will work closely with the R&R Managers to resolve problems with requirements entries and responses. The DBMs shall ensure, through proper coordination, that conflicting requirements do not reside in the PRDs. The SSP/ISSP database management responsibility is as follows:

a.	SSP Launch and Landing Volume I	KSC
b.	SSP Launch and Landing Volume II	KSC
c.	SSP Launch and Landing Volume III	KSC
d.	SSP Flight Volume I	JSC
e.	SSP Flight Volume II	JSC
f.	SSP Flight Volume III	JSC
g.	ISS Orbital Volume I	JSC
h.	ISS Orbital Volume II	MSFC

The rationale for these assignments is derived from current Program responsibilities. Launch and landing databases cover pre-launch, launch, landing, and post landing operations of SSP missions and payloads being transported and serviced by the Space Shuttle. These phases are managed by KSC; therefore, L&L PRDs/PSPs are managed by the KSC DBMS. Since Space Shuttle flight and orbital phases are managed by JSC, SSP flight PRDs/PSPs are managed by the JSC DBM. Following ISSP payloads deployment and completion of Space Shuttle support, mission support requirements for the ISSP orbital phase will be included in appropriate documents. For ISSP systems and payloads, the continuing requirements for on-orbit support shall be documented in the ISS Orbital PRD/PSP Volume I managed by the JSC DBM and Volume II managed by the MSFC DBM.

8.5 Requirements and Response Managers

The R&R Managers are concerned with the quality and accuracy of the organization's entries that make up the databases and shall be the single point contact for the submittal of requirements or responses for their respective organization, center, or agency. The R&R Managers shall work very closely with one another in developing the requirements statements, obtaining official responses, and ensuring that funding is available with the appropriate PRM to new or changed requirements.

8.6 ASRS Systems Manager

The ASRS Systems Manager is the interface for all ASRS issues for the DBMs and R&R Managers and chairs the ASRS Management Meeting. This individual also conducts teleconferences for coordinating standardized formats and procedures, outstanding action items status, proposed ASRS enhancements, and resolution of the user problems. The ASRS Systems Manager will manage the change process for ASRS application software and will function as the single point of contact with the ASRS community. Changes to the ASRS requested through the SSP/ISSP SRS Management Committee shall be brought to the ASRS Management Meeting for discussion and development of cost and operational impacts. Likewise, major changes to the ASRS software originated by the ASRS Systems Manager will be presented to the SSP/ISSP SRS Management Committee prior to implementation. Minor software changes will be handled through the ASRS Management Meeting. KSC, through the ASRS Systems Manager, shall provide training for ASRS users, and will publish, distribute, and maintain all ASRS related material

8.7 Processing of Requirements

Organizations or entities within a center requesting operational support, will convey their requests to their center's R&R Manager. The requesting R&R Manager has the responsibility of coordinating with the supporting R&R Manager(s) and the appropriate PRM for validation, approval, and funding of the requirement. The validation, approval, and funding processes are defined by each Program, and may differ depending on the type and scope of the requirements (Shuttle core, Shuttle payloads, Station core, Station payloads, launch versus orbit support, etc.). In any case, the requirements must be validated, approved and funded (if necessary) by the Program Office, or its delegate, prior to implementation. The PRM is responsible for coordinating requirements with the Center MSM as required by processes developed jointly between the Programs and SOMO. The R&R Managers will coordinate internal to their center, via documented internal processes, any issues regarding funding, approval, or implementation. The appropriate DBM will enter the requirement request into the ASRS data base and forward it to all supporting centers or agencies for response. Typically, requirement requests, responses, and approval/funding issues are coordinated and negotiated with all involved parties (either informally or through documented processes such as payload integration) prior to the formal PRD documentation process. This leads to a more efficient SRS process and significantly reduces bureaucracy and requirement processing/implementation time.

Requirements that require inter-center communications support will be coordinated through the NISN representative designated by SOMO/NISN for each Program. The coordination process varies depending on Program and mission phase. The requests for funding or implementation information to support inter-center operational communication requests will be through the NISN Center Representative or its delegate. Once communications requirements are approved and funded by the Program (via the Program's approval process), the requirements will be processed through the SRS PRD, where the delegated R&R Manager (reference ASRS Handbook KSC-HB-GP60-2) has the responsibility for interfacing with the appropriate NISN representative for implementing the requirement. Documented communications access control approval/permission must be obtained, per NMI 8610.11 (current revision), prior to PRD documentation.

New or changed requirements should be entered into ASRS databases as Routine Support Requirements (RSRs). At T-30 days prior to the start of a specific test or operation, support requirements are entered as Expedite Operations Requirements (EOR) to ensure more rapid processing and response. These expedited requirements are termed Launch Support Requirements (LSR) for the SSP L&L PRDs and Flight Support Requests (FSR) for the SSP Flight PRDs. At T-72 hours prior to start of tests or operations, real-time support requirements may be levied using existing scheduling systems, briefing messages, or network advisories. If the requirements are to be permanent, they will be entered into ASRS PRDs to document official requirements. For

ISSP, Orbital Support Requests (OSR) will be used during orbital phase when it is necessary to maintain continuing operations or take immediate action.

8.8 Funding of Support Requirements

Operations support requirements documented in the PRD must be funded prior to support implementation. The responsibility for support requirements funding may vary based on the type of requirement, scope of support, agency/organization requesting or providing support, and other factors. The supporting organization or agency is responsible for verifying that funds are available prior to implementing support. If funding has not been made available, or additional funding is required, the requester is responsible for coordination and validation of funds for support requirements.

Normally, when the original program documents are developed, support costs are assessed and funds are budgeted to cover the cost of the support requested. The subsequent requirements are assessed by the provider through the R&R Manager for support impact. Prior to "WILCO" support commitment responses, the provider, through the R&R Manager, will verify that the support is within the scope of existing capabilities, or that funds, have been committed or obligated, or that additional funds are required to cover any increase costs.

Prime requesters, as well as the providers, will coordinate with appropriate Program management, SOMO, and financial resource personnel to ensure funding is approved and available. The prime R&R Manager must be aware that new requirements or changes to existing requirements may require additional funding. Therefore, the approval levels within the organizations must be appropriate so that supporting organizations may avoid expending resources researching costs, etc. for requirements that will not be funded and, therefore, cannot be supported. The R&R Manager may submit requirements into the ASRS where funding has not been resolved; however, a statement must be provided to the effect that funding is not resolved and is being worked.

Shuttle Launch and Landing PRD Process flow

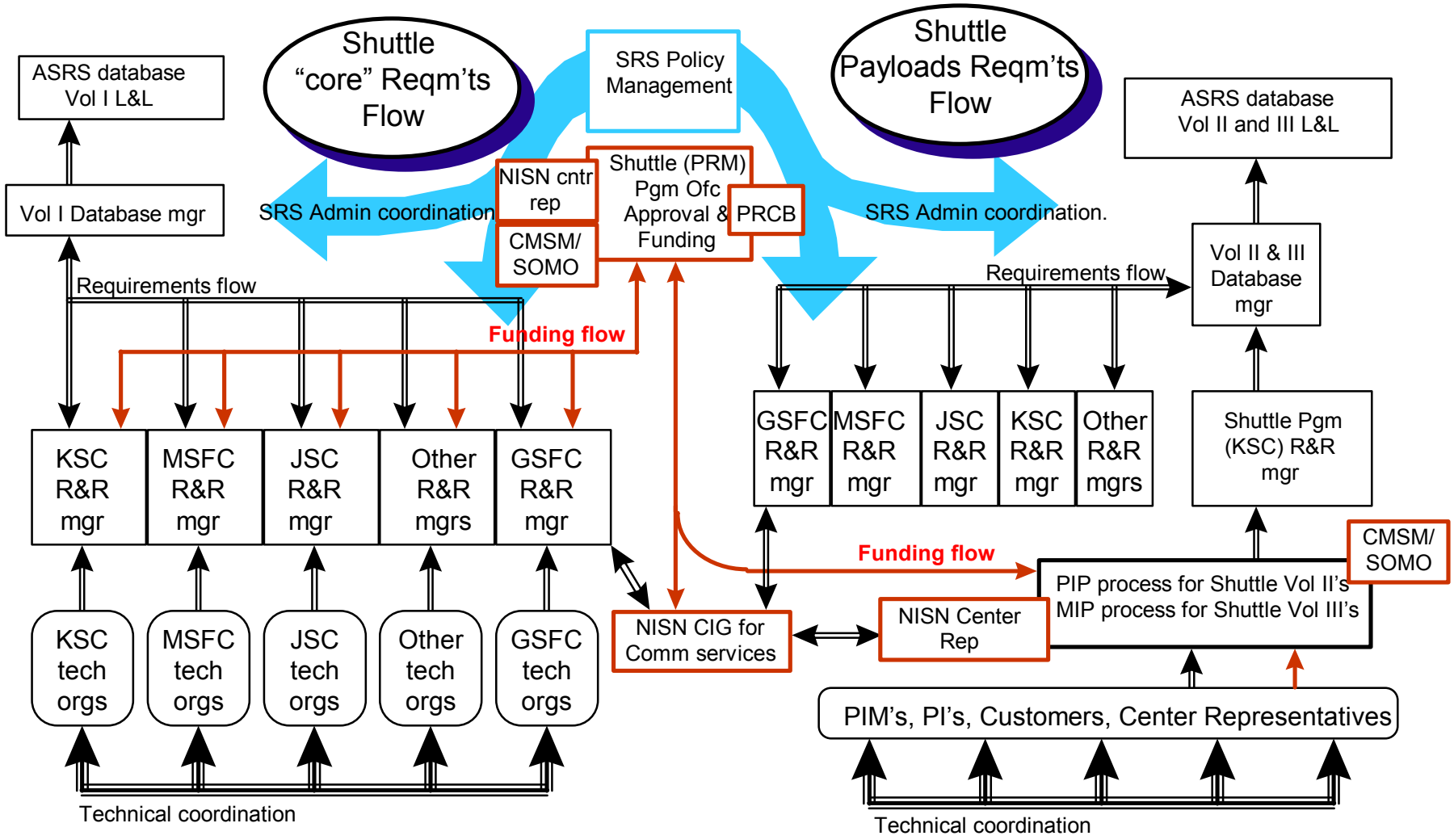

Figure 1

Shuttle Flight PRD Process flow

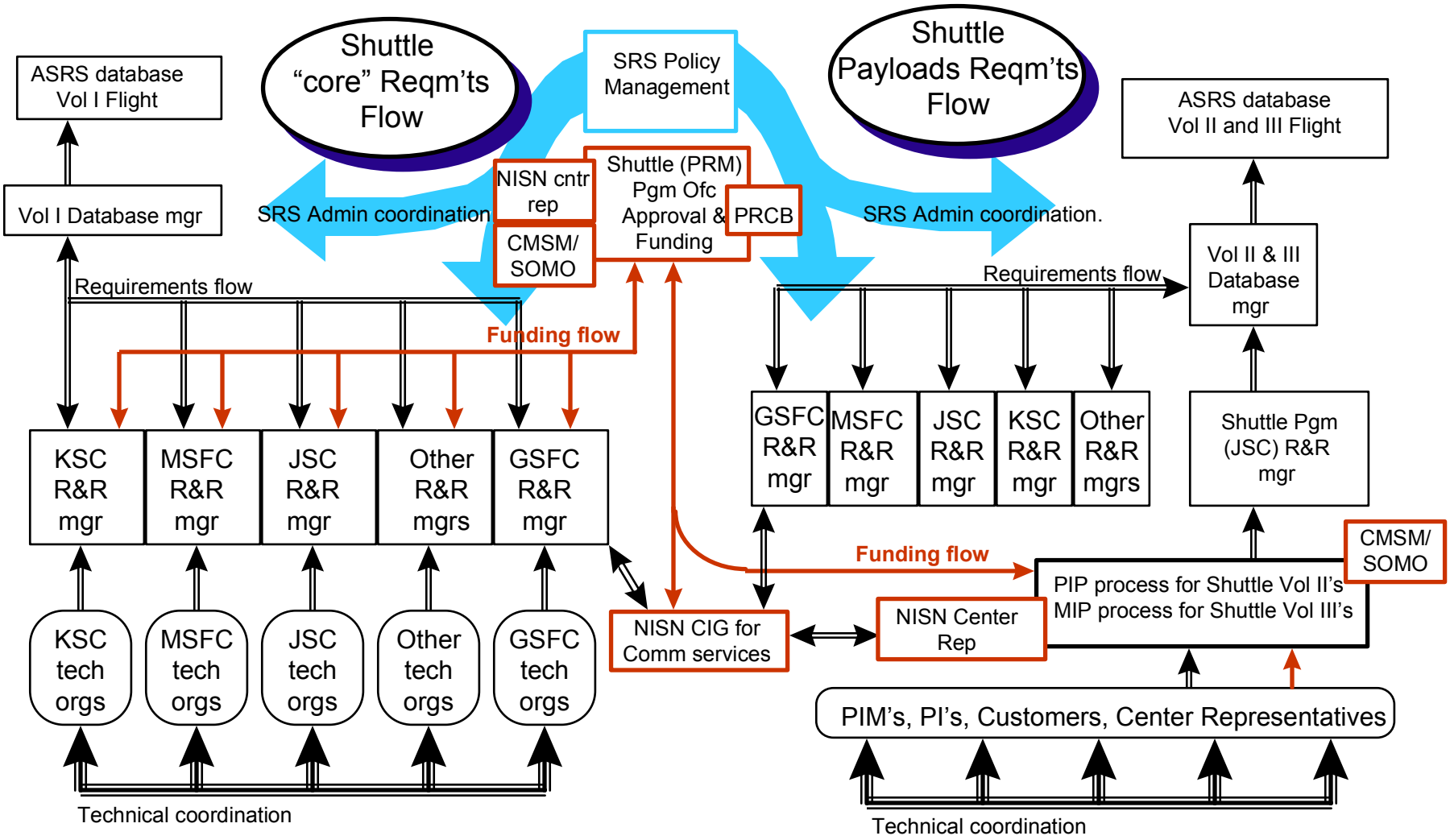

Figure 2

ISS Orbital PRD Process flow

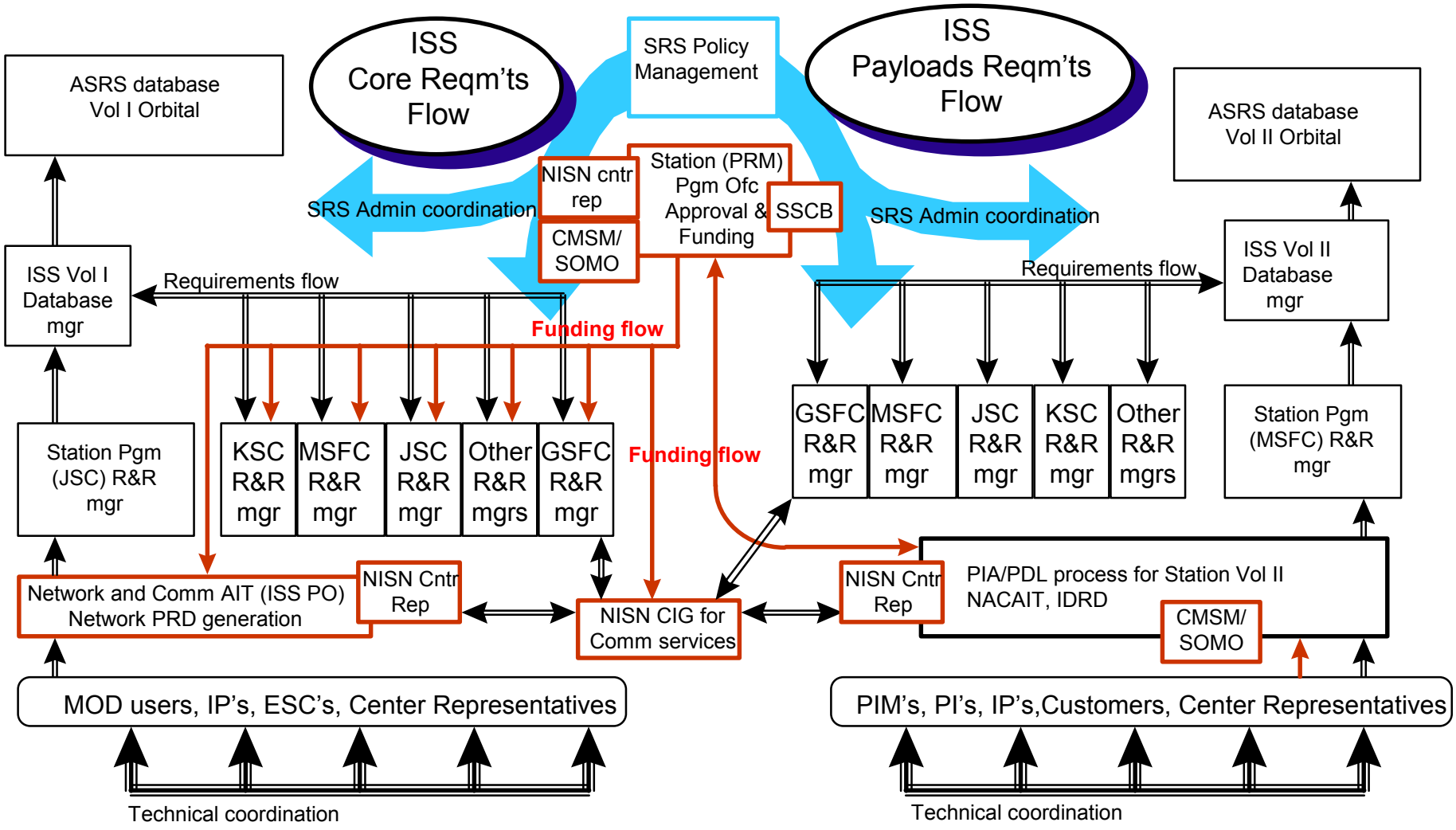

Figure 3

SSP/ISS SRS Management Plan Operational Support Requirements Process

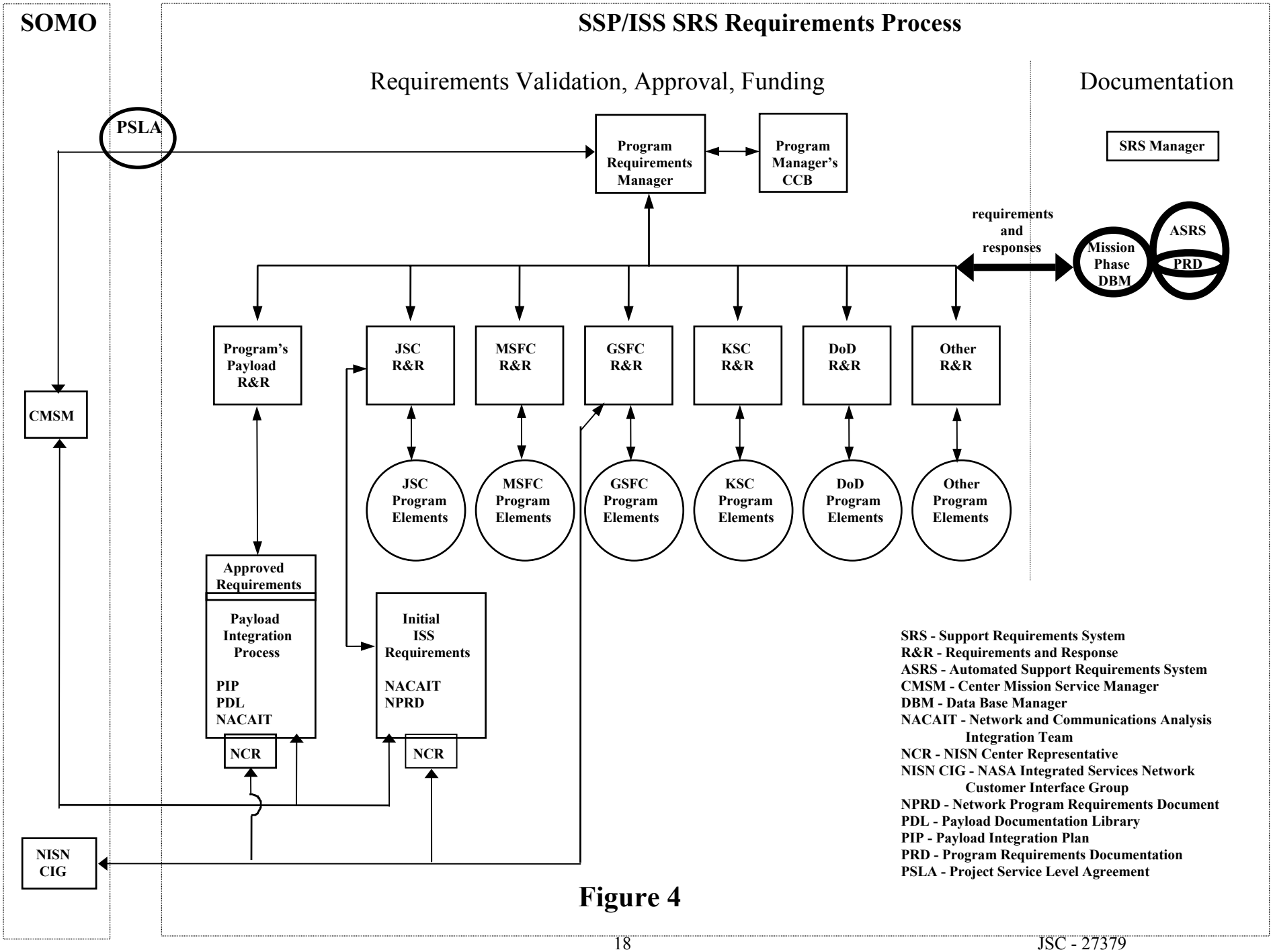

Figure 4

APPENDIX A

OPERATIONAL SUPPORT REQUIREMENTS
TYPICAL CATEGORIES

RF TELEMETRY & COMMAND
- TDRSS S-Band
- TDRSS K-Band
- Recording
- Air-to-Ground Voice
- Data Processing
- Frequency Protection

GROUND COMMUNICATIONS
- General
- Operational Voice
- Special Audio
- Secure Lines
- TV-Data Circuits
- Offsite Distribution
- Network Long Lines
- Recordings

METEOROLOGICAL
- Forecasts
- observations-is

SPECIAL INSTRUMENTATION
- Vibration
- Lightning Detection
- EMC / EMI

SPECIAL SERVICES
- Personnel
- Office Space /Furniture
- Fire/Rescue
- Security/Safety
- Vehicles
- Propellants/Gases
- Utilities
- Chemical Analysis

VIDEO
- Television
- Cameras
- Monitors
- Recordings

METRIC DATA
- Tracking
- Radar
- Optical

MEDICAL
- Bio-science
- Facilities
- Equipment

PHOTO
- Engineering
- Documentary

DATA DISPOSITION

TIMING & VISUAL DISPLAYS

COMPUTER SUPPORT
- Processed Data
- Display

ACRONYMS

ASRS	Automated Support Requirements System
ASTP	Apollo-Soyuz Test Project
CIG	NISN Customer Interface Group
CIO	Chief Information Office
CMSM	Center Mission Service Manager
DBM	Database Manager
DDMS	DoD Manned Space Flight Support Office
DoD	Department of Defense
EOR	Expedite Operations Requirements
ER	Eastern Range
FF-R	KSC NASA-Air Force Management and Aircraft Operations Office representative
FSR	Flight Support Request
GSFC	Goddard Space Flight Center
IP	International Partners and Participant
IRDG	Inter-Range Documentation Group
ISSP	International Space Station Program
JSC	Johnson Space Center
KSC	Kennedy Space Center
L&L	Launch and Landing
LSR	Launch Support Requirements
MOU	Memorandum of Understanding
MSFC	Marshall Space Flight Center
MSFSRD	Manned Space Flight Support Requirements Documentation
NASA	National Aeronautics and Space Administration
NISN	NASA Integrated Services Network
NMI	NASA Management Instruction
OD	Operations Directive
OR	Operations Request
OSR	Orbital Support Request
PID	Program Introduction Document
PRCB	Program Requirements Configuration Board
PRD	Program Requirements Document
PRM	Program Requirements Manager
PSP	Program Support Plan
RCC	DoD Range Commander's Council
RCC DG	RCC Documentation Group
R&R	Requirements and Response
RSR	Routine Support Requirements
SCD	Statement of Capabilities Document
SOMO	Space Operations Management Office
SPW	Space Wing
SPDMS	KSC Support Planning and Data Management System
SRS	Support Requirements System
SSP	Space Shuttle Program
STS	Space Transportation System
UDS	Universal Documentation System